

A Summary of Research Projects
with the
Agricultural Experiment Station
FY 1979



Agricultural Experiment Station
University of Alaska
Fairbanks, Alaska 99701

James V. Drew, Director

AGRICULTURAL RESEARCH

UNIVERSITY OF ALASKA, FAIRBANKS
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

A Summary of Research Projects with the Agricultural Experiment Station, FY 1979

Fairbanks Research Center
Palmer Research Center
Homer Research Center

Agricultural Experiment Station
University of Alaska
Fairbanks, Alaska 99701

James V. Drew, Director

July 1, 1979

TABLE OF CONTENTS

	Page
INTRODUCTION	1
LIST OF STAFF AND DISCIPLINES, FY 79.	2
SOURCE AND DISTRIBUTION OF FUNDS, FY 79	3
GRANTS AND CONTRACTS BY SOURCE AND AMOUNT, FY 79	4
SUMMARY OF EXPENDITURE BY MAJOR FUNCTION	5
DISTRIBUTION OF ALASKAN SCIENTIST YEARS (SY) BY NATIONAL RESEARCH PLANNING GROUPS (RPG) AND BY RESEARCH PROGRAMS (RP).	6
ADMINISTRATIVE PROJECTS.	8
Summary of Administrative Project Expenditures by Source and Amount, FY 79 . . .	9
Administrative Project Expenditures.	10
MAINTENANCE PROJECTS	16
Summary of Maintenance Project Expenditures by Source and Amount, FY 79.	17
Maintenance Project Expenditures	18
SERVICE PROJECTS.	21
Summary of Service Project Expenditures by Source and Amount, FY 79	22
Service Project Expenditures.	23
RESEARCH PROJECTS.	25
Summary of Research Project Expenditures by Source and Amount, FY 79	26
Distribution of Research Project Expenditures by State Goals, FY 79	27
Distribution of Research Project Expenditures by National Goals, FY 79.	28
Funding Sources and Research Projects for National Goal I	29
Funding Sources and Research Projects for National Goal II.	37
Funding Sources and Research Projects for National Goal III	41
Funding Sources and Research Projects for National Goal IV	56
Funding Sources and Research Projects for National Goal V.	57
Funding Sources and Research Projects for National Goal VI	58
Funding Sources and Research Projects for National Goal VII	60
Funding Sources and Research Projects for National Goal VIII.	62
Funding Sources and Research Projects for National Goal IX	63

INTRODUCTION

The purpose of this report is to outline the research projects of the Alaska Agricultural Experiment Station for the 1979 Fiscal year (from July 1, 1978 to June 30, 1979). In addition, the report summarizes these projects in terms of the sources and distribution of funds, expenditures by major functions, and the distribution of scientist years by National Research Planning Groups (RPG's) and Research Programs (RP's) identified by the United States Department of Agriculture.

The financial data given in this report represent the amounts expended for individual projects. In general, the financial data presented are based on the University's accounting system. The dollar amounts should not be taken as an official accounting, but rather as an index of the distribution of funds by research areas. The scientist years (SY's) are estimates of time committed by the professional staff for all projects and include SY's reported in the CRIS system.

LIST OF STAFF AND DISCIPLINES, FY 1979

Administration:

J. V. Drew, Ph.D.
 S. H. Restad, M.S.
 C. W. Hartman
 J. G. Glenn
 B. L. Leckwold*
 L. J. Klebesadel*, Ph.D.
 R. L. Taylor*, M.S.

Director
 Assistant Director
 Executive Officer
 Administrative Assistant
 Administrative Assistant
 ARS Research Leader
 ARS Location Leader

Research Staff:

L. D. Allen, M.S.
 E. A. Arobio
 A. L. Brundage, Ph.D.
 C. H. Dearborn*, Ph.D.
 R. Densmore, Ph.D.
 D. H. Dinkel, Ph.D.
 J. D. Fox, Ph.D.
 A. F. Gasbarro, M.S.
 F. M. Husby, Ph.D.
 A. Jubenville, Ph.D.
 L. J. Klebesadel*, Ph.D.
 C. W. Knight, M.S.
 W. M. Laughlin*, Ph.D.
 C. E. Lewis, Ph.D.
 J. D. McKendrick, Ph.D.
 M. A. Masters, Ph.D.
 W. W. Mitchell, Ph.D.
 M. J. Moore, B.S.
 B. J. Neiland, Ph.D.
 R. L. Taylor*, M.S.
 W. C. Thomas, Ph.D.
 K. Van Cleve, Ph.D.
 F. J. Wooding, Ph.D.
 W. G. Workman, Ph.D.

Associate Professor, Agricultural Engineering
 Research Associate
 Professor, Animal Science
 Research Horticulturist
 Research Associate
 Professor, Plant Physiology
 Assistant Professor, Resource Management
 Project Coordinator, Resource Management
 Assistant Professor, Animal Science
 Associate Professor, Resource Management
 Research Agronomist
 Instructor, Agronomy
 Research Soil Scientist
 Associate Professor, Resource Management
 Associate Professor, Agronomy
 Research Assistant
 Professor, Agronomy
 Research Assistant
 Professor, Botany
 Research Agronomist
 Associate Professor, Economics
 Professor, Forestry (Soils)
 Associate Professor, Agronomy
 Associate Professor, Economics

*Federal Research, Science and Education Administration, USDA Cooperating

SOURCE AND DISTRIBUTION OF FUNDS, FY 1979

Funding Source	Salary*	Other**	Salary Plus Other	Percent of Total
State	1,170,505	649,250	1,819,755	45.7
Hatch	333,995	246,092	580,087	14.6
Hatch Regional	82,844	25,458	108,302	2.7
McIntire-Stennis	109,563	44,228	153,791	3.9
FR/SFA	267,600	53,300	320,900	8.1
Coop Agreement	151,218	17,950	169,168	4.2
Title V, RDA	1,426	597	2,023	.1
Grants & Contracts	453,501	370,212	823,713	20.7
TOTAL	2,570,652	1,407,087	3,977,739	100.0

*Does not include benefits.

**Personnel benefits, travel, supplies, equipment, contractual services, postage and freight.

GRANTS AND CONTRACTS BY SOURCE AND AMOUNT, FY 1979

State of Alaska:

Department of Natural Resources	\$149,412
CETA	118,538
Department of Health and Social Services	8,845
Office of the Governor	17,691
Department of Commerce and Economic Development	73,564
Department of Fish and Game	18,718

Federal:

Soil Conservation Service	30,835
U.S. Forest Service	138,884
Sea Grant	50,126
National Science Foundation	11,626
CR, SEA Special Grants	17,886
Environmental Protection Agency	7,702
U.S. Department of the Interior	7,338

Other:

Alyeska Pipeline Service Company	172,548
----------------------------------	---------

TOTAL	\$823,713
-------	-----------

SUMMARY OF EXPENDITURE BY MAJOR FUNCTION

Function	Salary	Other	Salary Plus Other	Percent of Total
Administration	448,080	207,973	656,053	16.5
Maintenance	283,231	307,284	590,515	14.8
Service Projects	122,288	53,070	175,358	4.4
Research Projects	1,717,053	838,760	2,555,813	64.3
TOTAL	2,570,552	1,407,087	3,977,739	100.0

DISTRIBUTION OF ALASKAN SCIENTIST YEARS (SY)
BY NATIONAL RESEARCH PLANNING GROUPS (RPG)
AND BY RESEARCH PROGRAMS (RP)

RPG	RP	SY
1.00 Natural Resources	1.01 soil and land use	1.55
	1.02 water and watershed	----
	1.03 recreation	0.2
	1.04 environmental quality	0.7
	1.05 weather modification	----
	1.06 fish and wildlife	0.2
	1.07 remote sensing	----
	Total RPG 1.00	2.65
2.00 Forest Resources	2.01 inventory	0.6
	2.20 timber management	0.2
	2.03 forest production	0.2
	2.04 harvest, forest production	----
	2.05 forest watershed	0.5
	2.06 forest range and wildlife	0.7
	2.07 forest recreation & aesthetics	0.9
	2.08 alternative uses of land	0.3
	Total RPG 2.00	3.4
3.00 Crops	3.01 corn	----
	3.02 grain sorghum	----
	3.03 wheat	----
	3.04 small grains	1.8
	3.05 rice	----
	3.06 soybeans	----
	3.07 peanuts	----
	3.08 sugar	----
	3.09 forage/range/pasture	2.7
	3.10 cotton	----
	3.11 tobacco	----
	3.12 new crops/oil seed	0.3
	3.13 fruits	0.2
	3.14 vegetables	1.9
	3.15 plants to enhance environment	0.5
	3.16 bees & other pollinators	----
	Total RPG 3.00	5.95

RPG	RP	SY
4.00 Animals	4.01 beef	1.0
	4.02 dairy	1.1
	4.03 poultry	-----
	4.04 sheep	-----
	4.05 swine	0.7
	4.06 other animals	0.3
	4.07 aquatic food	-----
	Total RPG 4.00	2.9
5.00 People, Community, Information	5.01 food and nutrition	-----
	5.02 food safety025
	5.03 rural development	1.0
	5.04 insects affecting man	-----
	5.05 research on adm. of research	-----
	Total RPG 5.00	1.025
6.00 Comp. Trade, Adjustments	6.01 farm adjustments, price, income	-----
	6.02 foreign agricultural trade	0.4
	6.03 marketing competition	-----
	Total RPG 6.00	0.4
7.00 Gen. Research /Tech.	7.01 gen. research/tech.	
8.00		
9.00 Unclassified	9.01 unclassified	

ADMINISTRATIVE PROJECTS

**SUMMARY OF ADMINISTRATIVE PROJECT EXPENDITURES
BY SOURCE AND AMOUNT, FY 1979**

Funding Sources	Salary	Other	Salary Plus Other	Percent of Total
State	262,724	160,883	423,607	64.6
Hatch	32,478	28,355	60,833	9.2
Grants & Contracts	120,078	13,635	133,713	20.4
Federal	32,800	5,100	37,900	5.8
TOTAL	448,080	207,973	656,053	100.0

Title: Director's Office

Acct. No.: State: 4379-1-44351

Administrative Personnel: J. V. Drew, S. Restad, C. W. Hartman

Administrative Function: Overall administration of the Experiment Station.

Funding Source:	Salary	Other	Total
State:	154,671	64,430	219,101

Title: Director's Reserve

Acct. No.: State: 4374-1-44352

Administrative Personnel: J. V. Drew

Administrative Function: Administration of temporarily uncommitted funds and reserves for emergency situations.

Funding Source:	Salary	Other	Total
State:	5,813	1,385	7,198

Title: President's Reserve

Acct. No.: State: 4398-1-00000

Administrative Function: Administration of temporarily uncommitted funds reserved for emergency situations. Funds from this account may be used for other units than AES, but normally are not.

Funding Source:	Salary	Other	Total
State:	1,885	8,513	10,398

Title: Vice Chancellor's Reserve

Acct. No.: State: 4398-1-44420

Administrative Function: Administration of temporarily uncommitted funds reserved for emergency situations. Funds from this account may be used for other units than AES, but normally are not.

Funding Source:	Salary	Other	Total
State:	-0-	8,642	8,642

Title: Regional Research Coordination

Acct. No.: Hatch Regional: 4381-2-34716 (NC-100)

Administrative Personnel: J. V. Drew

Administrative Function: Facilitate the planning and coordination of regional research. Simplify accounting and disbursement of travel funds at each participating station for regional research planning and coordination.

Funding Source:	Salary	Other	Total
Hatch Regional	-0-	4,338	4,338

Title: Palmer Administration

Acct. No.: State: 4384-1-44395 Hatch: 4384-2-34705

Administrative Personnel: S. Restad

Administrative Function: Administrative support for research at the Palmer Research Center.

Funding Sources:	Salaries	Other	Total
State:	73,041	22,020	95,061
Hatch:	32,478	28,355	60,833
Total:	105,519	50,375	155,894

Title: Federal Program Administration

Acct. No.: WRU 3611-02010

Administrative Personnel: B. Leckwold

Administrative Function: Administration of the FR/SEA scientist group at Palmer.

Funding Source:	Salary	Other	Total
Federal:	32,800	5,100	37,900

Title: Publications Account

Acct. No.: State: 4379-1-44383

Administrative Personnel: M.S. Murray

Administrative Function: The cost of publication is not charged directly to research projects. Funds budgeted for publication are transferred to this account for payment. This account also allows for publication of such things as Agroborealis and other Experiment Station publications of general interest.

Funding Source:	Salary	Other	Total
State:	27,314	17,581	44,895

Title: Library Account

Acct. No.: State: 4384-1-44384

Administrative Personnel: S. Restad

Administrative Function: Because of the number of staff members located away from the University library, a number of books and journals of special interest are maintained at the Experiment Station facilities.

Funding Source:	Salary	Other	Total
State:	-0-	11,416	11,416

Title: Research Support Services

Acct. No.: State: 4382-1-00000

Administrative Personnel: J. V. Drew

Administrative Function: A portion of the overhead received by AES is returned to the University to pay for central support services. This account is charged for that purpose.

Funding Source:	Salary	Other	Total
State:	-0-	22,558	22,558

Title: Scientific Coordination of Environmental Studies

Acct. No.: 4381-2-27201

Administrative Personnel: R. B. Weeden

Administrative Function: Coordination of scientific research conducted by various University of Alaska and other investigators, directly related to Delta agricultural development project being carried out by the State of Alaska.

Funding Source:	Salary	Other	Total
State of Alaska, Department of Natural Resources	5,275	1,055	6,330

Title: CETA Title II-D PSE

Acct. No.: 4386-2-27233

Administrative Personnel: S. Restad

Administrative Function: Administrative support for research at the Palmer Research Center.

Funding Source:	Salary	Other	Total
CETA	13,557	881	14,438

Title: Special Project—PSE

Acct. No.: 4386-2-27237

Administrative Personnel: S. Restad

Administrative Function: Administrative support for research at the Palmer Research Center.

Funding Source:	Salary	Other	Total
CETA	2,840	185	3,025

Title: Title II—PSE

Acct. No.: 4386-2-27222

Administrative Personnel: S. Restad

Administrative Function: Administrative support for research at the Palmer Research Center.

Funding Source:	Salary	Other	Total
CETA	8,015	492	8,507

Title: Title I—YWE P.L. 521311

Acct. No.: 4386-2-27208

Administrative Personnel: S. Restad

Administrative Function: Administrative support for research at the Palmer Research Center.

Funding Source:	Salary	Other	Total
CETA	8,489	547	9,036

Title: Title III—SPEDY P.L. 507711

Acct. No.: 4386-2-27181

Administrative Personnel: S. Restad

Administrative Function: Administrative support for research at the Palmer Research Center.

Funding Source:	Salary	Other	Total
CETA	24,655	5,314	29,969

Title: Title VI—PSE P.L. 50311

Acct. No.: 4386-2-27146

Administrative Personnel: S. Restad

Administrative Function: Administrative support for research at the Palmer Research Center.

Funding Source:	Salary	Other	Total
CETA	49,495	4,068	53,563

Title: Senior Employment Program

Acct. No.: 4386-2-27226

Administrative Personnel: S. Restad

Administrative Function: Administrative support for research at the Palmer Research Center.

Funding Source:	Salary	Other	Total
State of Alaska, Department of Health & Social Services	7,752	1,093	8,845

MAINTENANCE PROJECTS

SUMMARY OF MAINTENANCE PROJECT EXPENDITURES
BY SOURCE AND AMOUNT

Funding Source	Salary	Other	Salary Plus Other	Percentage of Total
State	283,231	307,284	590,515	77.4

Title: Palmer Plant

Acct. No.: State: 4384-144353

Administrative Personnel: S. Restad

Administrative Function: Administration of the Palmer Research Center physical plant. As an off-campus facility, administration and maintenance of the plant is handled separately from on-campus facilities.

Funding Source:	Salaries	Other	Total
State:	68,408	79,646	148,054

Title: College Plant

Acct. No.: State: 4380-144355

Administrative Personnel: G. Carlson

Administrative Function: Even though the Fairbanks Farm is located adjacent to the University of Alaska Fairbanks campus, most of the physical facilities are administered and maintained separately from the rest of the University.

Funding Source:	Salaries	Other	Total
State:	59,026	64,648	123,674

Title: Matanuska Plant

Acct. No.: State: 4384-144356

Administrative Personnel: F. Perkins

Administrative Function: The Matanuska Farm is another off-campus facility of the Experiment Station which is maintained by the local staff.

Funding Source:	Salaries	Other	Total
State:	60,010	79,226	139,236

Title: Homer Plant

Acct. No.: State: 4390-1-44357

Administrative Personnel: D. Brainard

Administrative Function: The Homer Plant has been on a standby basis until last year when a new project was begun on contract with the State, so expenditures have primarily been for standby maintenance.

Funding Source:	Salaries	Other	Total
State:	40,357	26,093	66,450

Title: Animal Husbandry Support

Acct. No.: State: 4386-1-44382

Administrative Personnel: F. Perkins

Administrative Function: Farm operations in support of maintenance of the dairy herd at Matanuska.

Funding Source:	Salaries	Other	Total
State:	26,906	18,141	45,047

Title: College Research Services

Acct. No.: State: 4382-1-44408

Administrative Personnel: G. Carlson

Administrative Function: Work of the farm crew in support of research at the Fairbanks farm including production of animal feed.

Funding Source:	Salaries	Other	Total
State:	21,675	28,613	50,288

Title: Homer Research Services

Acct. No.: State: 4391-1-44365

Administrative Personnel: D. Brainard

Administrative Function: Perform the support services required for research work done at the Homer Research Center.

Funding Source:	Salary	Other	Total
State:	6,849	10,917	17,766

SERVICE PROJECTS

SUMMARY OF SERVICE PROJECT EXPENDITURES
BY SOURCE AND AMOUNT, FY 1979

Funding Source	Salary	Other	Salary Plus Other	Percentage of Total
State	122,288	53,070	175,358	100.0

Title: Laboratory Services

Acct. No.: State: 4386-1-44414

Personnel: W. Mitchell

Function: Soil and tissue analysis for various research projects, contract analysis and soil testing for Extension Services.

Funding Source:	Salaries	Other	Total
State:	66,921	32,439	99,360

Title: Matanuska Valley Breeders—Dairy Herd Improvement

Acct. No.: State: 4386-1-44361 SY's 0.1

Personnel: A. L. Brundage

Function: Artificial insemination for dairy industry and dairy herd improvement records.

Funding Source:	Salaries	Other	Total
State:	27,109	8,104	35,213

Title: Crop Improvement

Acct. No.: State: 4386-1-44380

Personnel: C. Knight

Function: Increase and distribution of public varieties and assistance in seed certification for Alaska.

Funding Source:	Salary	Other	Total
State:	3,979	709	4,688

Title: Rotary Plow

Acct. No.: State: 4386-1-44381

Personnel: S. Restad

Termination: 30 June 1979

Function: Rental and maintenance of rotary plow to demonstrate land clearing and preparation.

Funding Source:	Salaries	Other	Total
State:	5,887	5,023	10,910

Title: Engineering Problems

Acct. No.: State: 4386-1-44379

Personnel: L. Allen

Function: Evaluate, document, and report special, peculiar, or unique engineering problems and situations encountered in Alaska's agriculture.

Funding Source:	Salaries	Other	Total
State:	18,392	6,795	25,187

RESEARCH PROJECTS

SUMMARY OF RESEARCH PROJECT EXPENDITURES
BY SOURCE AND AMOUNT, FY 1979

Funding Sources	Salary	Other	Salary Plus Other	Percentage of Total
State	502,262	132,351	634,613	24.8
Hatch	301,517	217,737	519,254	20.3
Hatch Regional	82,844	21,120	103,964	4.1
Federal	234,800	48,200	283,000	11.1
Coop. Agreement	151,218	17,950	169,168	6.6
McIntire-Stennis	109,563	44,228	153,791	6.0
Title V	1,426	597	2,023	0.1
Grants & Contracts	333,423	356,577	690,000	27.0
TOTAL	1,717,053	838,760	2,555,813	100.0

DISTRIBUTION OF RESEARCH PROJECT EXPENDITURES
BY STATE GOALS, FY 79

		Amount	%
GOAL 1:	INCREASE THE EFFICIENCY OF PRODUCTION SYSTEMS FOR FOOD AND WOOD PRODUCTS, INCLUDING ENERGY CONSERVATION AND THE DEVELOPMENT OF NEW LANDS	\$1,630,473	63.8
GOAL 2:	IMPROVE PROCESSING, TRANSPORTATION AND MARKETING OF FOOD AND WOOD PRODUCTS IN ALASKA FOR MARKETS IN ALASKA AND FOR EXPORT	111,583	4.4
GOAL 3:	IMPROVE RESOURCE INVENTORIES AND DEVELOP LAND-USE PLANNING FOR AGRICUL- TURE AND FORESTRY THAT WILL ENHANCE ENVIRONMENTAL QUALITY	306,235	12.0
GOAL 4:	DEVELOP RESOURCE MANAGEMENT FOR IMPROVING THE QUALITY OF LIFE, INCLUDING REVEGETATION PROCEDURES, LANDSCAPING AND HOME GARDENING' AND OUTDOOR RECREATION	507,522	19.8
	TOTAL	2,55,813	100.0

**DISTRIBUTION OF RESEARCH PROJECT EXPENDITURES
BY NATIONAL GOALS, FY 79**

	Amount	%
GOAL I: INSURE A STABLE AND PRODUCTIVE AGRICULTURE FOR THE FUTURE THROUGH WISE MANAGEMENT OF NATURAL RESOURCES.	\$ 602,313	23.6
GOAL II: PROTECT FORESTS, CROPS AND LIVESTOCK FROM INSECTS, DISEASES AND OTHER HAZARDS.	97,963	3.8
GOAL III: PRODUCE AN ADEQUATE SUPPLY OF FARM AND FOREST PRODUCTS AT DECREASING REAL PRODUCTION COSTS.	1,368,878	53.6
GOAL IV: EXPAND THE DEMAND FOR FARM AND FOREST PRODUCTS BY DEVELOPING NEW AND IMPROVED PRODUCTS AND PROCESSES AND ENHANCING PRODUCT QUALITY.	0	0
GOAL V: IMPROVE EFFICIENCY IN THE MARKETING SYSTEM.	0	0
GOAL VI: EXPAND EXPORT MARKETS AND ASSIST DEVELOPING NATIONS	111,583	4.4
GOAL VII: PROTECT CONSUMER HEALTH AND IMPROVE NUTRITION AND WELL-BEING OF THE AMERICAN PEOPLE.	4,553	0.2
GOAL VIII: ASSIST RURAL AMERICANS TO IMPROVE THEIR LEVEL OF LIVING.	0	0
GOAL IX: PROMOTE COMMUNITY IMPROVEMENT INCLUDING DEVELOPMENT OF BEAUTY, RECREATION, ENVIRONMENT, ECONOMIC OPPORTUNITY, AND PUBLIC SERVICE.	370,523	14.4
TOTAL	\$2,555,813	100.0

NATIONAL GOAL I

Insure a stable and productive agriculture for the future through wise management of Natural Resources.

Funding Sources	Salary	Other	Salary Plus Other	Percentage of Total
State	155,279	55,861	211,140	35.1
Hatch	29,004	34,351	63,355	10.5
Hatch Regional	16,824	1,314	18,138	3.0
Grants & Contracts	27,921	18,392	46,313	7.7
Title V RDA	1,426	597	2,023	0.3
Federal	71,800	13,400	85,200	14.1
McIntire-Stennis	99,785	41,690	141,475	23.5
Coop. Agreement	28,317	6,352	34,669	5.8
TOTAL	430,356	171,957	602,313	100.0

Title: Soil Fertilizer, Minor Elements and Lime Requirements of Alaskan soils for Crop Production.

Acct. No.: FR/SEA WRU3611-20780, 4386-2-34693

RPA 102 RPG 1.00 RP 1.01

National Goal: I

State Goal: 1 Termination 1980
SY's 1.0

Principal Investigator: W. M. Laughlin

Project Description: Develop better ways to manage fertilizers, lime and minor elements for high yields and nutritional crop quality.

Funding Sources:	Salaries	Other	Total
FR/SEA	71,800	13,400	85,200
Coop. Agreement	28,317	6,352	34,669
Total	100,117	19,752	119,869

Title: Study of Development Rights Buy Back Possibilities.

Acct. No.: 4381-2-27187

RPA 104 RPG 2.00 RP 2.08

National Goal: I

State Goal: 3 SY's 0.2

Principal Investigator: W. G. Workman

Project Description: Examine the feasibility of a program whereby the state of Alaska would purchase development rights from Alaska farmland owners as a means of preserving agricultural land.

Funding Source:	Salaries	Other	Total
State of Alaska, Department of Natural Resources	18,146	11,854	30,000

Title: Private Land Use.

Acct. No.: State: 4381-1-44416

RPA 104 RPG 2.00 RP 2.08

National Goal: I

State Goal: 3 SY's 0.1

Principal Investigator: W. Workman

Project Description: Examination of efficiency and equity implications of various institutions affecting private land use in Alaska.

Funding Source:	Salary	Other	Total
State:	11,560	3,430	14,990

Title: Soil Range Survey.

Acct. No.: 4386-2-20492

RPA 101 RPG 1.00 RP 1.01

National Goal: I

State Goal: 3 Expiration Date: 9/30/79
SY's 0.1

Principal Investigator: W. Mitchell

Project Description: Cooperate with the U.S. Soil Conservation Service in developing a Soil Range Survey including soils mapping and vegetative mapping of approximately 2 million acres on the Seward Peninsula.

Funding Source:	Salaries	Other	Total
U.S. Soil Conservation Service	5,243	2,895	8,138

Title: Fertility Evaluation and Improvement of Alaskan Soils.

Acct. No.: State: 4386-1-44406

Hatch: 4386-2-34709

RPA 101 RPG 1.00 RP 1.01

National Goal: I

State Goal: 1

Termination: 6/30/80
SY's 0.1

Principal Investigator: W. Mitchell

Project Description: To develop and correlate soil nutrient extractants with plant responses for Alaskan conditions. To survey the fertility status of remote Alaskan soils as an aid in evaluating their Agricultural potential. To relate (for specific soil types) under field conditions appropriate composition and quantities of required fertilizer.

Funding Sources:	Salaries	Other	Total
State:	633	1,938	2,571
Hatch:	—0—	28,172	28,172
Total:	633	30,110	30,743

Title: Analysis of Human Dynamics of Rural Alaskan Communities and Implications.

Acct. No.: 4381-2-20494

RPA 104 RPG 5.00 RP 5.03

National Goal: I

State Goal: 3

Termination: 9/30/79
SY's 0.1

Principal Investigator: W. G. Workman

Project Description: To finalize tax analysis of Native corporation lands and to propose development alternatives for sound development of the reindeer enterprise.

Funding Sources:	Salary	Other	Total
Title V, Rural Development Act 1972	1,426	597	2,023

Title: Environmental Conditions Affecting Crop Growth in Alaska.

Acct. No.: State: 4386-1-44390 Hatch: 4386-2-34710
Hatch Regional: 4386-2-34715 (NC-94)

RPA 109 RPG 1.00 RP 1.04

National Goal: I

State Goal: 3

Termination: 6/30/79
SY's 0.7

Principal Investigator: L. Allen

Project Description: To relate observed weather parameters to plant development, yield and quality. To define mathematical models for predicting development, yield and quality. To evaluate methods of improving the plant micro-environment.

Funding Sources:	Salaries	Other	Total
State:	6,915	5,450	12,365
Hatch:	29,004	6,179	35,183
Hatch Regional:	16,824	1,314	18,138
Total:	52,743	12,943	65,686

Title: Range Management.

Acct. No.: State: 4386-1-44386

RPA 110 RPG 2.00 RP 2.06

National Goal: I

State Goal: 1

SY's 0.5

Principal Investigator: J. D. McKendrick

Project Description: This project is designed to acquire data on the production and carrying capacity of the major range types in the southcentral Alaska region. Changes in seasonal forage quality and changes in animal forage preferences as well as animal performances will be determined.

Funding Source:	Salaries	Other	Total
State:	32,641	13,282	45,923

Title: Range Types and Productivity for Ungulates in Portions of the Cook Inlet Basin, Alaska.

Acct. No.: 4377-2-34718

RPA 110 RPG 2.00 RP 2.06

National Goal: I

State Goal: 3

Termination: 10/10/80
SY's 0.2

Principal Investigator: J. D. McKendrick

Project Description: Ungulate range types in the boreal forest and alpine zones in a section of Cook Inlet Basin, Alaska, will be measured to provide a basis for calculating a range resource inventory.

Funding Source:	Salary	Other	Total
McIntire-Stennis:	3,440	2,248	5,688

Title: Relationships Among Vegetation, Ground Ice, and Disturbances on North-facing Slopes near Fairbanks.

Acct. No.: 4377-2-34720

RPA 111 RPG 2.00 RP 2.02

National Goal: I

State Goal: 1

Termination: 9/30/79
SY's 0.1

Principal Investigator: B. J. Neiland

Project Description: A long-term study of the relationships of forest vegetation and successional stages and ground ice on north-facing slopes, and the effects of mechanical disturbances.

Funding Source:	Salary	Other	Total
McIntire-Stennis	8,200	1,468	9,668

Title: Nutrient Cycling in Selected Interior Alaska Forest Types.

Acct. No.: 4377-2-34717

RPA 111 RPG 2.00 RP 2.02

National Goal: I

State Goal: 1

Termination: 9/30/80
SY's 0.1

Principal Investigator: K. Van Cleve

Project Description: Establish the distribution of biomass and the cycle of certain chemical elements with selected age classes of birch, aspen, white spruce, and black spruce. Assess the effect of artificial amendments on tree growth in birch, aspen, white spruce, and black spruce.

Funding Source:	Salary	Other	Total
McIntire-Stennis:	88,145	37,974	126,119

Title: Forest Soils Research Lab.

Acct. No.: State: 4253-1-00000

RPA 102 RPG 2.00 RP 2.01

National Goal: I

State Goal: 3

SY's 0.3

Principal Investigator: K. Van Cleve

Project Description: To support research on relationships between forest types within framework of nutrient cycling.

Funding Source:	Salaries	Other	Total
State:	103,530	31,761	135,291

Title: Susitna River Basin Study.

Acct. No.: 4386-2-20464

RPA 101 Rpg 1.00 RP 1.01

National Goal: 1

State Goal: 3

Termination: 6/30/84
SY's 0.1

Principal Investigator: W. W. Mitchell

Project Description: This project consists of cooperative research with the Susitna River Basin Study Program. The lead agency is the Soil Conservation Service; AES cooperates with work on vegetative analysis and mapping.

Funding Source:	Salary	Other	Total
USDA, Soil Conservation Service	4,532	3,643	8,175

NATIONAL GOAL II

Protect forests, crops and livestock from insects, diseases and other hazards.

Funding Sources	Salary	Other	Salary Plus Other	Percentage of Total
Federal	38,400	1,000	39,400	40.2
Coop. Agreement	25,035	3,291	28,326	28.9
Grants & Contracts	9,234	21,003	30,237	30.9
TOTAL	72,669	25,294	97,963	100.0

Title: Livestock Insect Control (Warble Control in Reindeer).
Acct No.: ARS WRU 3611-20480, Coop. Agreement 4386-2-34695
RPA 212 RPG 4.00 RP 4.06

National Goal: II

State Goal: 1 Termination 1981
SY's 0.2

Principal Investigator: R. H. Washburn

Project Description: New and improved methods to reduce losses caused by insects, ticks, and mites.

Funding Sources:	Salaries	Other	Total
Federal:	7,700	200	7,900
Coop. Agreement:	6,000		6,000
Total:	13,700	200	13,900

Title: Horticultural Crop Insect Control.

Acct. No.: ARS WRU 3611-20220, Coop. Agreement 4386-2-34695
RPA 204 RPG 3.00 RP 3.14

National Goal: II

State Goal: 1 Termination 1980
SY's 0.3

Principal Investigator: R. H. Washburn

Project Description: New and improved methods to reduce losses caused by insects and mites.

Funding Sources:	Salaries	Other	Total
Federal:	11,500	300	11,800
Coop. Agreement	9,000		9,000
Total:	20,500	300	20,800

Title: Field Crops Insect Control.

Acct. No.: ARS WRU 3611-20240, Coop. Agreement 4386-2-34695

RPA 207 RPG 3.00 RP 3.04

National Goal: II

State Goal: 1

Termination 1980
SY's 0.5

Principal Investigator: R. H. Washburn

Project Description: Reduce crop losses in field crops by conducting research to control insects, mites, and nematodes by plant resistance, biological, genetic and behavioral, chemical, cultural, and physical means; determinary economic thresholds and losses; and developing research in virus-vector interrelationships and rearing efficiency.

Funding Sources:	Salaries	Other	Total
Federal:	19,200	500	19,700
Coop. Agreement:	10,035	3,291	13,326
Total:	29,235	3,791	33,026

Title: A Bibliography of Fire Effects Literature for the Tundra and Taiga of Alaska and Adjacent Canada.

Acct. No.: 4253-2-20472

RPA 203 RPG 2.00 RP 2.03

National Goal: II

State Goal: 1

Termination 6/1/79
SY's 01

Principal Investigator: K. Van Cleve

Project Description: Establish bibliography on impact of fire in subarctic forest ecosystems in circumpolar boreal forests.

Funding Source:	Salary	Other	Total
USDA, Forest Service:	2,313	1,355	3,668

Title: A Final Bibliography of Fire Effects Literature for the Tundra and Taiga of Alaska and Adjacent Canada.

Acct. No.: 4253-2-20486

RPA 203 RPG 2.00 RP 2.03

National Goal: II

State Goal: 1

Termination 1/31/80
SY's 0.1

Principal Investigator: K. Van Cleve

Project Description: Establish bibliography on impact of fire in subarctic forest ecosystems in circumpolar boreal forests.

Funding Source:	Salary	Other	Total
USDA, Forest Service	6,921	1,957	8,878

Title: Analysis of Pesticide Residue and Evaluation of Conservation Tillage Practice.

Acct. No.: 4381-2-27197

RPA 209 RPG 3.00 RP 3.12

National Goal: II

State Goal: 1

Termination 11/30/79
SY's 0.0

Principal Investigator: F. J. Wooding, C. W. Knight, and C. E. Lewis

Project Description: A 2840 John Deere tractor, a 10-foot John Deere chisel plow, and an 11-foot Allis Chalmers tandem disk have been purchased and are being used in research plots evaluating the effects of various tillage practices on crop production and wind erosion control. Rapeseed herbicide studies were conducted in 1978, and plant tissue samples were shipped to the IR-4 pesticide lab in East Lansing, Michigan, for residue analyses. When completed, these analyses will be beneficial in obtaining clearance from the Environmental Protection Agency for the use of certain herbicides in rapeseed production.

Funding Source:	Salary	Other	Total
State of Alaska, Office of the Governor	-0-	17,691	17,691

NATIONAL GOAL III

Produce an adequate supply of farm and forest products at decreasing real production costs.

Funding Sources	Salary	Other	Salary Plus Other	Percentage of Total
State	255,273	59,609	314,882	23.0
Hatch	240,100	160,345	400,445	29.2
Hatch Regional	57,281	12,713	69,994	5.1
Federal	124,600	33,800	158,400	11.6
Coop. Agreement	97,866	8,307	106,173	7.8
Grants & Contracts	162,765	150,003	312,768	22.8
McIntire-Stennis	4,663	1,553	6,216	0.5
TOTAL	942,548	426,330	1,368,878	100.0

Title: Logging Study.
Acct. No.: 4254-2-34620
RPA 107 RPG 2.00 RP 2.05
National Goal: III
State Goal: 3

Termination 9/30/78
SY's 0.1

Principal Investigator: J. Fox

Project Description: Objectives of project were to assess post-harvesting stocking levels and post-harvesting site conditions, specifically soil erosion. Information on revegetation by herbs and shrubs were also collected.

Funding Source:	Salary	Other	Total
McIntire-Stennis	4,663	1,553	6,216

Title: Forest Productivity and Site Quality in the Upper Yukon River Drainage.
Acct. No.: 4253-2-20493
RPA 110 RPG 2.00 RP 2.01
National Goal: III
State Goal: 1

Termination 4/30/80
SY's 0.1

Principal Investigator: K. Van Cleve

Project Description: Identify potentially productive forest sites in Porcupine River Drainage based on biomass productivity, soil temperature, nutrient turnover and physiographic site properties.

Funding Source:	Salary	Other	Total
USDA, Forest Service	5,793	9,473	15,266

Title: Forest Growth and Development in the Porcupine Inventory Unit in Relation to Environmental Factors.

Acct. No.: 4253-2-20463

RPA 110 RPG 2.00 RP 2.01

National Goal: III

State Goal: 1

Termination 4/30/79
SY's 0.2

Principal Investigator: K. Van Cleve

Project Description: Identify potentially productive forest sites in Porcupine River drainage based on biomass productivity, soil temperature, nutrient turnover and physiographic site properties.

Funding Source:	Salary	Other	Total
USDA, Forest Service	29,050	21,994	51,044

Title: Protein Content and Nutritional Value of Grain Grown in Interior Alaska.

Acct. No.: 4381-2-27225

RPA 311 RPG 4.00 RP 4.05

National Goal: III

State Goal: 1

Termination 12/31/79
SY's 0.1

Principal Investigator: F. M. Husby, and F. J. Wooding

Project Description: A multidisciplinary project to study protein content of grain. Agronomy research will be designed to develop hypothetical combination of cultural practices that will maximize both yield and protein content of barley. Animal science research will determine the quality and nutritional value of the protein in the related barleys.

Funding Source:	Salary	Other	Total
State of Alaska, Dept. of Commerce & Economic Development	1,259	7,241	8,500

Title: Cattle Management and Nutrition.

Acct. No.: 4391-2-27141

RPA 311 RPG 4.00 RP 4.01

National Goal: III

State Goal: 1

SY's 0.5

Principal Investigator: F. M. Husby

Project Description: To determine the economics of winter feeding management for beef cattle on the Kenai Peninsula and to evaluate the native bluejoint (*Calamagrostis cunadensis*) grasslands as a rangeland grazing resource for beef cattle production.

Funding Source:	Salaries	Other	Total
State of Alaska, Dept. of Natural Resources	66,350	41,732	108,082

Title: Red Meats.

Acct. No.: State: 4381-1-44403

Hatch: 4381-2-34568

RPA 311 RPG 4.00 RP 4.01

National Goal: III

State Goal: 1

Termination: not Hatch activated
SY's 0.5

Principal Investigator: F. M. Husby

Project Description: To study the nutritional requirements of beef animals under Alaskan conditions with particular reference to the Kenai Peninsula.

Funding Sources:	Salaries	Other	Total
State:	21,866	7,250	29,116
Hatch:	1,667	2,863	4,530
Total:	23,533	10,113	33,646

Title: Vegetable Breeding and Production.

Acct. No.: ARS WRU 3611-20020, Coop. Agreement 4386-2-34691

RPA 304 RPG 3.00 RP 3.14

National Goal: III

State Goal: 1

Termination 1980
SY's 1.0

Principal Investigator: C. H. Dearborn

Project Description: New and improved genetic populations, breeding lines, and varieties of vegetables that combine yield potential and favored quality characters, including reduced contents of undesirable constituents, with better resistance to pests, tolerance to environmental stress, and adaptation for mechanical culture, harvest and handling.

New and improved cultural and management practices that increase vegetable yields, minimize production losses, improve quality attributes and conserve and use source resources efficiently.

Funding Sources:	Salaries	Other	Total
Federal:	38,000	4,200	42,200
Coop. Agreement:	41,666	8,307	49,973
Total:	79,666	12,507	92,173

Title: Improved Oat and Wheat Varieties and Production Practice for Alaska. Improved Barley Varieties and Production Practices for Alaska.

Acct. No.: ARS WRU 3611-20050, Coop. Agreement 4386-2-34694

RPA 307 RPG 3.00 RP 3.04

National Goal: III

State Goal: 1

Termination 1980
SY's 0.5

Principal Investigator: R. L. Taylor

Project Description: New and improved genetic populations, breeding lines, and varieties of small grain that combine yield potentials and favored quality characteristics, including reduced contents of undesirable constituents, with better resistance to pests, tolerance to environmental stress, responsiveness to new cultural and management practices and adaptation for mechanized culture, harvesting, and handling.

New and improved cultural and management practices that increase small grain yields through disease, insect, and weed control; that minimize production losses; and that conserve more efficiently scarce or irreplaceable resources.

Funding Sources:	Salaries	Other	Total
Federal:	15,400	3,500	18,900
Coop. Agreement:	17,300		17,300
Total:	32,700	3,500	36,200

Title: Breeding and Production—Forage Crops for Hay, Pasture, and Other Uses Including Turf.

Acct. No.: ARS WRU 3611-20100, Coop. Agreement 4386-2-34692

RPA 307 RPG 3.00 RP 3.09

National Goal: III

State Goal: 1

Termination 1980
SY's 1.5

Principal Investigator: L. J. Klebesadel, and R. L. Taylor

Project Description: Develop new and improved genetic populations, breeding lines, cultivars of forage crops that combine improved yield potentials and favored quality characteristics, including reduced contents of undesirable constituents, with better resistance to pests, tolerance to environmental stress, conservation of scarce resources, and adaptation for mechanized culture.

Funding Sources:	Salaries	Other	Total
Federal:	71,200	26,100	97,300
Coop. Agreement:	38,900		38,900
Total:	110,100	26,100	136,200

Title: Utilization of Alaskan Marine By-Products in Rations for Domestic Livestock.

Acct. No.: 4692-2-34742

RPA 311 RPG 4.00 RP 4.05

National Goal: III

State Goal: 1

Termination 10/31/80
SY's 0.1

Principal Investigator: F. M. Husby, and A. L. Brundage

Project Description: To determine the utilization of marine by-products as protein and energy sources in rations for domestic livestock, including both ruminants and non-ruminants.

Funding Source:	Salary	Other	Total
Sea-Grant:	23,786	26,340	50,126

Title: Nutrition of High-Producing Dairy Cows.

Acct. No. Hatch Regional: 4386-2-34713 (NC-115)

RPA 311 RPG 4.00 RP 4.02

National Goal: III

State Goal: 1

Termination 9/30/82
SY's 0.1

Principal Investigator: A. L. Brundage

Project Description: To study the nutritive requirements and intake of both high-producing dairy cattle (in excess of 80 pounds of milk per day and 20,000 pounds of milk per lactation) an average producing dairy cattle (less than 80 pounds of milk per day and 16,000 pounds of milk per lactation) throughout the lactation, including dry periods.

Funding Source:	Salary	Other	Total
Hatch Regional:	10,193	2,426	12,619

Title: Dairy Cattle Breeding and Management for Milk Production in Alaska.

Acct. No.: State: 4386-1-44392 Hatch: 4386-2-34706

RPA 311 RPG 4.00 Rp 4.02

National Goal: III

State Goal: 1

Termination 6/30/82
SY's 0.9

Principal Investigator: A. L. Brundage

Project Description: To evaluate the interrelationship of dairy cattle breeding with selection for milk production with selected elements for dairy cattle management in Alaska.

Funding Sources:	Salaries	Other	Total
State:	53,102	9,237	62,339
Hatch:	139,329	93,040	232,369
Total:	192,431	102,277	294,708

Title: Improving Dairy Cattle Through Breeding with Special Emphasis on Selection.

Acct. No.: Hatch Regional: 4386-2-34712 (NC-2)

RPA 311 RPG 4.00 RP 4.02

National Goal: III

State Goal: 1

Termination 9/30/82
SY's 0.1

Principal Investigator: A. L. Brundage

Project Description: To evaluate the effectiveness and the limitation of single trait selection for milk yield among all sires in designed experiments partially replicated at different locations, including measurement of correlated responses in traits of economical and theoretical interest.

Funding Sources:	Salary	Other	Total
Hatch Regional:	32,872	6,715	39,587

Title: Utilization of High Protein Cereal Grains Produced in Alaska for Quality Pork Production.

Acct. No.: State: 4381-1-44385 Hatch: 4381-2-34700

RPA 311 RPG 4.00 RP 4.05

National Goal: III

State Goal: 1

Termination 12/31/82
SY's 0.5

Principal Investigator: F. M. Husby

Project Description: To determine the nutritional value and quality of high-protein cereal grains produced in northern latitudes for efficient pork production, and to evaluate marine by-products, plant protein or crystalline amino acids as the source of limiting amino acids to improve the protein quality of these cereal grains for growing and finishing pigs.

Funding Sources:	Salaries	Other	Total
State:	10,789	1,878	12,667
Hatch:	16,635	16,459	33,094
Total:	27,424	18,337	45,761

Title: Production Cost and Crop Management for Small Grains in Interior Alaska.

Acct. No.: State: 4381-1-44409 Hatch: 4381-2-34701

RPA 309 RPG 3.00 RP 3.04

National Goal: III

State Goal: 1 Termination 9/30/79
SY's 0.2

Principal Investigator: C. E. Lewis

Project Description: Evaluate the effects of various management systems on costs of production of small grains to prepare enterprise reports on economics of size; alternatives in land, labor, and machinery; financial management returns.

Funding Sources:	Salaries	Other	Total
State:	8,423	1,544	9,967
Hatch:	9,076	4,384	13,460
Total:	17,499	5,928	23,427

Title: Forage Production and Utilization Systems as a Base for Livestock Production.

Acct. No.: Hatch Regional: 4386-2-34714 (NC-114)

RPA 309 RPG 3.00 RP 3.09

National Goal: III

State Goal: 1 Termination 9/30/82
SY's 0.4

Principal Investigator: A. L. Brundage, and W. W. Mitchell

Project Description: To study production and utilization of annual forages (barley/peas, oats/peas, alfalfa, sweet clover, and winter rye) and perennial forages (Bering hairgrass, brome grass, and timothy). To study forage quality components as a function of time, species, and morphological parts of plants. To utilize agronomic and animal science data from the project to evaluate economic alternatives within various livestock and crop combinations.

Funding Source:	Salary	Other	Total
Hatch Regional:	14,216	3,572	17,788

Title: Small Grain Production in the Tanana Valley of Interior Alaska.

Acct. No.: State: 4381-1-44401 Hatch: 4381-2-34702

RPA 307 RPG 3.00 RP 3.04

National Goal: III

State Goal: 1 Termination 2/4/79
SY's 0.5

Principal Investigator: F. J. Wooding

Project Description: To develop sufficient technical knowledge, through a broad research program of variety testing and cultural practices to make possible efficient production of barley, oats, and wheat in a subarctic environment; to evaluate triticale as a potential new grain crop; and to determine the quality of Alaska-produced grains.

Funding Sources:	Salaries	Other	Total
State:	35,855	7,939	43,794
Hatch:	22,577	8,271	30,848
Total:	58,432	16,210	74,642

Title: Development and Application of Plant Materials for Forage, Pasture, Turf, and Conservation Uses.

Acct. No.: State: 4386-1-44388 Hatch: 4386-2-34708

RPA 307 RPG 3.00 RP 3.09

National Goal: III

State Goal: 4 Termination 4/1/81
SY's 0.6

Principal Investigator: W. M. Mitchell

Project Description: To select superior performing grasses within native species and compare with standard forage grasses in different agricultural regions of the state. To determine response of selections and standards to range of fertilizer treatments and determine forage quality as related to different conditions. To determine applicability of forage and grazing entries for supplemental pasture. To select superior performing grasses for conservation uses in different regions of the state. To select superior performing grasses for turf purposes. To expand upon knowledge base for additional exploratory and collection efforts.

Funding Sources:	Salaries	Other	Total
State:	56,318	11,921	68,239
Hatch:	26,721	22,987	49,708
Total:	83,039	34,908	117,947

Title: Fruit Improvement.

Acct. No.: State: 4381-1-44417

Hatch: 4381-2-34696

RPA 304 RPG 3.00 RP 3.13

National Goal: III

State Goal: 4

Termination 9/30/82
SY's 0.2

Principal Investigator: D. H. Dinkel

Project Description: Fruit cultivars and strains from indigenous and exotic sources will be compared. Improved cultural practices will be devised. Propagation techniques will be devised to increase desirable clones.

Funding Sources:	Salaries	Other	Total
State:	16,570	2,899	19,469
Hatch:	15,121	5,635	20,756
Total:	31,691	8,534	40,225

Title: Vegetable Improvement for Interior Alaska.

Acct. No.: State: 4381-1-44418

Hatch: 4381-2-34697

RPA 304 RPG 3.00 RP 3.14

National Goal: III

State Goal: 4

Termination 9/30/82
SY's 0.3

Principal Investigator: D. H. Dinkel

Project Description: To evaluate and select new cultivars for Interior Alaska. To develop and improve nutrition for standard cultivars under different soil and climatic regimes. To devise cultural practices to improve yield and crop potentials.

Funding Sources:	Salaries	Other	Total
State:	16,598	2,867	19,465
Hatch:	8,974	6,706	15,680
Total:	25,572	9,573	35,145

Title: Biology of Musk Oxen on Arctic Ranges.

Acct. No.: 4481-2-34628

RPA 100 RPG 3.00 RP 3.09

National Goal: III

State Goal: 3

Expiration Date: 4/30/80
SY's 0.2

Principal Investigator: J. D. McKendrick

Project Description: Evaluating the existing Musk Ox range at Unalakleet for carrying capacity, animal preference and possible range management improvements.

Funding Source:	Salary	Other	Total
N.S.F.:	7,224	4,402	11,626

Title: Forestry Land Resources.

Acct. No.: 4381-2-20453

RPA 110 RPG 2.00 RP 2.01

National Goal: III

State Goal: 3

Termination 8/31/78
SY's 0.0

Principal Investigator: A. Gasbarro

Project Description: Develop a regional land use plan for the Yukon-Porcupine Area.

Funding Source:	Salary	Other	Total
U.S. Forest Service	10,516	7,886	18,402

Title: Economic Evaluation of Clearing 2,000 Acres of Agricultural Land.

Acct. No.: 4381-2-27190

RPA 101 RPG 1.00 RP 1.01

National Goal: III

State Goal: 1 Termination 2/1/79
SY's 0.1

Principal Investigator: C. E. Lewis

Project Description: After completion of 14 methods of knocking down and piling tree and moss cover on agricultural lands, evaluate the effect of burning on the final clearing process, i.e. the condition of the cleared land and the impact of using normal farm equipment in the first years of farming.

Funding Source:	Salary	Other	Total
State of Alaska, Department of Natural Resources	2,151	2,849	5,000

Title: Economic Evaluation of Rapeseed Production in Interior Alaska.

Acct. No.: 4381-2-27211

RPA 307 RPG 3.00 RP 3.12

National Goal: III

State Goal: 1 SY's 0.1

Principal Investigator: C. E. Lewis

Project Description: Determine the economic factors associated with rapeseed production in rotation with small grains. Consider size, planting and harvesting techniques, and seed and fertilizer application levels.

Funding Source:	Salary	Other	Total
State of Alaska, Dept. of Commerce & Economic Development	4,873	3,394	8,267

Title: Environmental Studies Related to Agricultural Production for the Delta Land Management Study—Delta-Clearwater Area.

Acct. No.: 4381-2-20471

RPA 102 RPG 1.00 RP 1.01

National Goal: III

State Goal: 1 Termination 4/30/80
SY's 0.1

Principal Investigator: C. W. Knight, and C. E. Lewis

Project Description: Determine the movement of agricultural fertilizers (N, P, K) and pesticides in the soil and water regime and evaluate the effects on water quality. Correlate the data with climatic conditions, i.e. wind velocity, soil moisture, precipitation, snow cover.

Funding Source:	Salary	Other	Total
Soil Conservation Service	2,455	12,067	14,522

Title: Continuation of Rapeseed Research in Interior Alaska.

Acct. No.: 4381-2-27200

RPA 307 RPG 3.00 RP 3.12

National Goal: III

State Goal: 1 Termination 6/30/79
SY's 0.2

Principal Investigator: F. J. Wooding

Project Description: Initial evaluations of rapeseed indicate that this crop is highly adapted to the growing conditions of interior Alaska. Research is concentrated on variety testing and certain key cultural practices to provide sufficient information to make production of rapeseed profitable to farmers. The major cultural practices being studied are: rapeseed rotation, herbicides for weed control, and fertilizer application rates.

Funding Source:	Salary	Other	Total
State of Alaska, Dept. of Commerce & Economic Development	8,049	5,384	13,433

Title: Protein Content and Nutritional Value of Grains Grown in Alaska.

Acct. No.: 4381-2-27225

RPA 501 RPG 3.00 RP 3.04

National Goal: III

State Goal: 1

Termination 12/31/79
SY's 0.1

Principal Investigator: F. M. Husby and F. J. Wooding

Project Description: This project is a multidisciplinary approach to studying protein content of grain. Barley will be emphasized over other grains (oats, wheat, rye, and triticale) because it is currently the most important grain crop in Alaska. Agronomic research will be directed toward cultural practices effecting protein content of grain grown in interior Alaska. Animal science research will concentrate on determining the quality and nutritional value of that protein.

Funding Source:	Salary	Other	Total
State of Alaska, Dept. of Commerce & Economic Development	1,259	7,241	8,500

Title: Waste Heat Utilization.

Acct. No.: State: 4381-1-44422

RPA 304 RPG 3.00 RP 3.14

National Goal: III

State Goal: 1

SY's 0.3

Principal Investigator: D. H. Dinkel

Project Description: To investigate and devise practices for the use of reject heat sources and geothermal resources for vegetables, ornamental, and fruit production. To determine the feasibility of commercial production using reject heat sources.

Funding Source:	Salary	Other	Total
State:	35,752	14,074	49,826

NATIONAL GOAL IV

Expand the demand for farm and forest products by developing new and improved products and processes and enhancing product quality.

Funding Source	Salary	Other	Total
	0	0	0

NATIONAL GOAL V

Improve efficiency in the marketing system.

Funding Source	Salary	Other	Total
	0	0	0

NATIONAL GOAL VI

Expand export markets and assist developing nations.

Funding Sources	Salary	Other	Salary Plus Other	Percentage of Total
State	45,638	8,470	54,108	48.5
Hatch	9,872	12,739	22,611	20.3
Grants & Contracts	798	34,066	34,864	31.2
TOTAL	56,308	55,275	111,583	100.0

Title: Analysis of Export Markets for Alaskan Barley and Rapeseed Products.

Acct. No.: State: 4381-1-44421; Hatch: 4381-2-34704, 4381-2-27136

RPA 6.01 RPG 6.00 RP 6.02

National Goal: VI

State Goal: 2

Termination 9/30/81
SY's 0.4

Principal Investigator: W. C. Thomas

Project Description: Identify economic and institutional variables for major foreign markets relative to Alaska Barley and related products. Analyze alternative types of export marketing systems which may be applicable to Alaska. Delineate major transportation alternatives. Assess relationship between market organizations and stability of farm income.

Funding Sources:	Salaries	Other	Total
Hatch:	9,872	12,739	22,611
State:	45,638	8,470	54,108
State of Alaska, Dept. of Commerce & Economic Development	798	34,066	34,864
Total:	56,308	55,275	111,583

NATIONAL GOAL VII

Protect consumer health and improve nutrition and well-being of the American people.

Funding Source	Salary	Other	Salary Plus Other	Percentage of Total
CSRS Special Grant	3,858	695	4,553	100.0

Title: Pesticide Usage

Acct. No.: 4386-2-20455

RPA 701 RPG 5.00 RP 5.02

National Goal: VII

State Goal: 4

Expiration Date 9/30/80
SY's .025

Project Description: To conduct a statewide survey of pesticide usage in Alaska in cooperation with the U.S.D.A. Statistical Reporting Service.

Funding Source:	Salary	Other	Total
PL-89-106—CSRS	3,858	695	4,553

NATIONAL GOAL VIII

Assist Rural Americans to improve their level of living.

Funding Source	Salary	Other	Total
	0	0	0

NATIONAL GOAL IX

Promote community improvement including development of beauty, recreation, environment, economic opportunity, and public service.

Funding Sources	Salary	Other	Salary Plus Other	Percentage of Total
State	46,072	8,411	54,483	14.7
Hatch	22,541	10,302	32,843	8.9
Hatch Regional	8,739	7,093	15,832	4.3
McIntire-Stennis	5,115	985	6,100	1.6
Grants & Contracts	128,847	132,418	261,265	70.5
TOTAL	211,314	159,209	370,523	100.0

Title: Cold Climate Oil Spill Research and Technology Pertaining to Alaskan Shorelines.

Acct. No.: 4386-2-24600

RPA 901 RPG 1.00 RP 1.04

National Goal: IX

State Goal: 4

Termination 3/31/79
SY's 0.05

Principal Investigator: J. McKendrick

Project Description: This two year project concerns a literature review of terrestrial oil spills and recommends actions to be taken if an oil spill occurs.

Funding Source:	Salary	Other	Total
EPA	4,762	2,940	7,702

Title: Investigations on Revegetation and Correlated Physical and Biological Parameters on Denuded Lands in the Vicinity of Fairbanks, Alaska.

Acct. No.: 4377-2-34719

RPA 901 RPG 3.00 RP 3.15

National Goal: IX

State Goal: 4

Termination 9/30/79
SY's 0.1

Principal Investigator: B. J. Neiland

Project Description: To determine revegetation patterns on treated and untreated borrow pits, roadside cuts, and other denuded lands. To determine physical and biological parameters that correlate with these patterns.

Funding Source:	Salary	Other	Total
McIntire-Stennis	5,115	985	6,100

Title: Determinants of Choice in Outdoor Recreation.

Acct. No.: Hatch Regional: 4381-2-34711 (W-133) State: 4381-1-44415
Hatch: 4381-2-34703

RPA 902 RPG 2.00 RP 2.07

National Goal: IX

State Goal: 4 Termination 9/30/79
SY's 0.8

Principal Investigator: W. G. Workman, and A. Jubenville.

Project Description: To identify and quantify to the extent possible, the variables affecting individual choices in outdoor recreation.

Funding Sources:	Salaries	Other	Total
Hatch Regional:	8,739	7,093	15,832
State:	6,150	1,082	7,232
Hatch:	6,878	3,369	10,247
Total:	21,767	11,544	33,311

Title: Alder for Mineland Restoration in Cold-Dominated Climates.

Acct. No.: 4386-2-20454

RPA 905 RPG 3.00 RP 3.15

National Goal: IX

State Goal: 4 Expiration Date 12/31/79
SY's 0.1

Principal Investigator: W. Mitchell

Project Description: Study methods of establishing Alder on mineland spoil areas as a means of restoring a vegetative cover on denuded areas.

Funding Source:	Salary	Other	Total
USDA, CSRS Grant	3,729	1,588	5,317

Title: Ornamental Plant Improvement for Alaska.

Acct. No.: Hatch: 4381-2-34698

RPA 906 RPG 3.00 RP 3.15

National Goal: IX

State Goal: 4 Termination 9/1/80
SY's 0.3

Principal Investigator: D. H. Dinkel.

Project Description: To improve the quality of living in Alaska through improvement of ornamental plants. To develop propagation techniques for indigenous and hardy exotic ornamental plants, so that a local nursery industry can develop. To provide background knowledge for bedding plant industries and potential cut flower industries.

Funding Source:	Salary	Other	Total
Hatch:	11,627	5,365	16,992

Title: Interrelationship of Rural Development Infrastructure and Production Modernization.

Acct. No.: State: 4386-1-44393 Hatch Regional: 4386-2-34707

RPA 907 RPG 5.00 RP 5.03

National Goal: IX

State Goal: 1 Termination 6/30/79
SY's 0.9

Principal Investigator: W. E. Burton

Project Description: Determine functional and economic production systems for selected crop and livestock enterprises, availability of needed modern information-technology-institutions, and infrastructures by enterprise, and cultural-legal and institutional factors caused in enterprise success or failure.

Funding Sources:	Salaries	Other	Total
State:	39,922	7,329	47,251
Hatch:	4,036	1,568	5,604
Total:	43,958	8,897	52,855

Title: Control of Brucellosis in Alaska—Vaccine Testing.

Acct. No.: 4381-2-20487

RPA 904 RPG 4.00 RP 4.06

National Goal: IX

State Goal: 1

Termination 9/30/79
SY's 0.1

Principal Investigator: R. A. Dietrich and F. M. Husby

Project Description: To determine the presence and amount of serum antibodies produced in reindeer that have been experimentally vaccinated against *Brucella suis* type 4. Duration of antibody titers will be determined over a nine month period for each of several vaccines.

Funding Source:	Salary	Other	Total
USDA—Science & Education Administration	5,638	2,378	8,016

Title: Alyeska Willow Project.

Acct. No.: 4381-2-28755

RPA 107 RPG 2.00 RP 2.05

National Goal: IX

State Goal: 4

Termination 12/31/79
SY's 0.3

Principal Investigator: B. J. Neiland

Project Description: To investigate techniques for establishment on a large scale of species of willow in arctic Alaska; determine effects on moose browse of removing cuttings, and characterize undisturbed-by-man moose browse stands; and to collect information on natural regeneration of willow in both disturbed and undisturbed sites.

Funding Source:	Salaries	Other	Total
Alyeska Pipeline Service Company	71,639	100,909	172,548

Title: Artificial Regeneration of Trees and Shrubs Following Prescribed Fire.

Acct. No.: 4381-2-20489

RPA 107 RPG 2.00 RP 2.05

National Goal: IX

State Goal: 4

Termination 4/15/80
SY's 0.1

Principal Investigator: B. J. Neiland

Project Description: To determine the germination success and patterns and first year survival of artificially seeded black spruce, white spruce, birch, alder, willow, and aspen on sites burned to various degrees of severity, and the first year survival of planted black spruce, aspen and willow seedlings, and willow cuttings planted on sites burned to various degrees of severity.

Funding Source:	Salary	Other	Total
U.S. Forest Service	8,808	3,092	11,900

Title: Response of Shrubs to Fire Treatments.

Acct. No.: 4381-2-20482

RPA 901 RPG 2.00 RP 2.07

National Goal: IX

State Goal: 4

Termination 5/15/80
SY's 0.1

Principal Investigator: B. J. Neiland

Project Description: To determine the response of blueberry and lingonberry to varying degrees of burn severity with respect to sprouting response, seasonal development and response to clipping.

Funding Source:	Salary	Other	Total
U.S. Forest Service	5,855	20	5,875

Title: Nongame Program Development.

Acct. No.: 4381-2-27191

RPA 903 RPG 1.00 RP 1.06

National Goal: IX

State Goal: 4

Termination 6/30/79
SY's 0.2

Principal Investigator: R. B. Weeden

Project Description: Justification, description, priorities, and potential funding for an expanded program of nongame wildlife management by the Alaska Department of Fish and Game.

Funding Source:	Salary	Other	Total
State of Alaska, Dept. of Fish & Game	11,754	6,964	18,718

Title: Chugach Resource Demand Study.

Acct. No.: 4381-2-20480

RPA 903 RPG 1.00 RP 1.03

National Goal: IX

State Goal: 4

Termination 2/15/79
SY's 0.2

Principal Investigator: W. G. Workman

Project Description: Assess the demand and supply conditions of resources on the Chugach National Forest as a means of assisting the Forest Service in its land use planning program.

Funding Source:	Salary	Other	Total
U.S. Forest Service	16,074	7,777	23,851

Title: Natural Revegetation of Placer Mined Lands.

Acct. No.: 4461-2-34770

RPA 107 RPG 2.00 RP 2.05

National Goal: IX

State Goal: 4

Expiration Date 9/30/79
SY's 0.0

Principal Investigator: J. McKendrick

Project Description: Evaluating the natural revegetation progress that has taken place on placer mined lands of interior Alaska in order to make better recommendations for the management of future disturbances caused by mining operations.

Funding Source:	Salary	Other	Total
OSM-Grant	588	6,750	7,338